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(54) Title: PROCESS FOR PREPARING FINE METAL OXIDE PARTICLES

(57) Abstract: Disclosed is a process for preparing fine metal oxide particles, comprising the following steps of reacting a reactant mixture comprising i) water, ii) at least one water-soluble metal nitrate and iii) ammonia or ammonium salt at 250-700 °C under 180-550 bar for 0.01 sec to 10 min in a reaction zone to synthesize the metal oxide particles, the metal nitrate being contained at an amount of 0.01-20 wt % in the reactant mixture; and separating and recovering the metal oxide particles from the resulting reaction products. According to the present invention, nano-sized metal oxide particles are synthesized, while the harmful by-products generated concurrently therewith are effectively decomposed in the same reactor.